Information Technology Infrastructure Library (ITIL)

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INTRODUCTION

It is hard to believe that the IT Infrastructure Library or ITIL® is 20 years old. On its third version now, ITIL is the most widely adopted framework for IT Service Management in the world. It is a practical, no-nonsense approach to the identification, planning, delivery and support of IT services to the business. In the early 80’s, the evolution of computing technology moved from mainframe-centric infrastructure and centralized IT organizations to distributed computing and geographically dispersed resources. While the ability to distribute technology afforded organizations more flexibility, the side effect was inconsistent application of processes for technology delivery and support. The UKs Office of Government Commerce recognized that utilizing consistent practices for all aspects of a service lifecycle could assist in driving organizational effectiveness and efficiency as well as predictable service levels and thus, ITIL was born. ITIL guidance has since been a successful mechanism to drive consistency, efficiency and excellence into the business of managing IT services.

SERVICE MANAGEMENT

Since ITIL is an approach to IT “service” management”, the concept of a service must be discussed. A service is a means of delivering value to customers by facilitating outcomes customers want to achieve without the ownership of specific costs and risks. It is something that provides value to customers.

Service Management is a set of specialized organizational capabilities for providing value to customers in the form of services. The primary objective of Service Management is to ensure that the IT services are aligned to the business needs and actively support them. It is imperative that the IT services underpin the business processes, but it is also increasingly important that IT acts as an agent for change to facilitate business transformation. Service management is concerned with more than just delivering services. Each service, process or infrastructure component has a lifecycle, and service management considers the entire lifecycle from strategy through design and transition to operation and continual improvement.

Services that customers can directly utilize or consume are known as “business” services. An example of a business service that has common applicability across industries would be Payroll. Payroll is an IT service that is used to consolidate information, calculate compensation and generate paychecks on a regular periodic basis. Payroll may rely on other “business” services such as “Time Tracking” or “Benefits Administration” for information necessary to calculate the correct compensation for an employee during a given time period.

In order for Payroll to run, it is supported by a number of technology or “infrastructure” services. An infrastructure service does its work in the background, such that the business does not directly interact with it, but technology services are necessary as part of the overall value chain of the
business service. “Server Administration”, “Database Administration”, “Storage Administration” are all examples of technology services required for the successful delivery of the Payroll business service. See Figure 1.

It has become increasingly recognized that information is the most important strategic resource that any organization has to manage. Key to the collection, analysis, production and distribution of information within an organization is the quality of the IT Services provided to the business. It is essential that we recognize that IT Services are crucial, strategic, organizational assets and therefore organizations must invest appropriate levels of resource into the support, delivery and management of these critical IT Services and the IT systems that underpin them. However, these aspects of IT are often overlooked or only superficially addressed within many organizations.

Key issues facing many of today’s senior Business Managers and IT Managers are:

- IT and business strategic planning
- Integrating and aligning IT and business goals
- Implementing continual improvement
- Measuring IT organization effectiveness and efficiency
- Optimizing costs and the Total Cost of Ownership (TCO)
- Achieving and demonstrating Return on Investment (ROI)
- Demonstrating the business value of IT
- Developing business and IT partnerships and relationships
- Improving project delivery success
- Outsourcing, in sourcing and smart sourcing
- Using IT to gain competitive advantage
- Delivering the required, business justified IT services (i.e. what is required, when required and at an agreed cost)
- Managing constant business and IT change
- Demonstrating appropriate IT governance.

IT has traditionally been focused on the “infrastructure” services and managing the technology silos. IT Service Management guidance in ITIL suggests a more holistic approach to managing services from end-to-end. Managing the entire business service along with its underlying components cohesively assures that we are considering every aspect of a service (and not just the individual technology silos) – to assure that we are delivering the required functionality (or utility – accurate paychecks for all employees) and service levels (or warranty – delivered within a certain timeframe, properly secured, available when necessary) to the business customer.

**ITIL & SERVICE LIFE CYCLE**

ITIL (IT Infrastructure Library) provides a framework of Best Practice guidance for IT Service Management and since its creation, ITIL has grown to become the most widely accepted approach to IT Service Management in the world. It provides a practical, no-nonsense framework for identifying, planning, delivering and supporting IT services to the business. ITIL advocates that IT services must be aligned to the needs of the business and underpin the core business processes. It provides
guidance to organizations on how to use IT as a tool to facilitate business change, transformation and growth. The ITIL best practices are currently detailed within five core publications which provide a systematic and professional approach to the management of IT services, enabling organizations to deliver appropriate services and continually ensure they are meeting business goals and delivering benefits.

ITIL is organized around a Service Lifecycle: which includes: Service Strategy, Service Design, Service Transition, Service Operation and Continual Service Improvement.

**SERVICE STRATEGY:**
Understanding who the IT customers are, the service offerings that are required to meet the customers’ needs, the IT capabilities and resource that are required to develop these offerings and the requirements for executing successfully. Driven through strategy and throughout the course of delivery and support of the service, IT must always try to assure that cost of delivery is consistent with the value delivered to the customer.

It sets out guidance to all IT service providers and their customers, to help them operate and thrive in the long term by building a clear service strategy, i.e. a precise understanding of:

- What services should be offered
- Who the services should be offered to
- How the internal and external market places for their services should be developed
• The existing and potential competition in these marketplaces, and the objectives that will differentiate the value of what you do or how you do it
• How the customer(s) and stakeholders will perceive and measure value, and how this value will be created
• How customers will make service sourcing decisions with respect to use of different types of service providers
• How visibility and control over value creation will be achieved through financial management
• How robust business cases will be created to secure strategic investment in service assets and service management capabilities
• How the allocation of available resources will be tuned to optimal effect across the portfolio of service
• How service performance will be measured.

SERVICE DESIGN:
The Service Design provides guidance for the design and development of services and service management processes. It covers design principles and methods for converting strategic objectives into portfolios of services and service assets. The scope of Service Design is not limited to new services. It includes the changes and improvements necessary to increase or maintain value to customers over the lifecycle of services, the continuity of services, achievement of service levels, and conformance to standards and regulations. It guides organizations on how to develop design capabilities for service management.

Service Design assures that new and changed services are designed effectively to meet customer expectations. The technology and architecture required to meet customer needs cost effectively is an integral part of Service Design. Additionally, processes required to manage services are also part of the design phase. Service management systems and tools that are necessary to adequately monitor and support new or modified services must be considered as well as mechanisms for measuring service levels, technology and process efficiency and effectiveness.

SERVICE TRANSITION:
The Service Transition provides guidance for the development and improvement of capabilities for transitioning new and changed services into operations. It provides guidance on how the requirements of Service strategy encoded in Service design are effectively realized in Service operation while controlling the risks of failure and disruption. The publication combines practices in Release Management, Programme Management, and Risk Management and places them in the practical context of service management. It provides guidance on managing the complexity related to changes to services and service management processes, preventing undesired consequences while allowing for innovation. Guidance is provided on transferring the control of services between customers and service providers.

Through the Service Transition phase of the lifecycle the design is built, tested and moved into production to assure that the business customer can achieve the desired value. This phase
addresses managing changes, controlling the assets and configuration items (underlying components – hardware, software, etc) associated with new and changed systems, service validation and testing and transition planning to assure that users, support personnel and the production environment has been prepared for the release to production.

SERVICE OPERATIONS:
This embodies practices in the management of service operations. It includes guidance on achieving effectiveness and efficiency in the delivery and support of services so as to ensure value for the customer and the service provider. Strategic objectives are ultimately realized through service operations, therefore making it a critical capability. Guidance is provided on ways to maintain stability in service operations, allowing for changes in design, scale, scope and service levels. Organizations are provided with detailed process guidelines, methods and tools for use in two major control perspectives: reactive and proactive. Managers and practitioners are provided with knowledge allowing them to make better decisions in areas such as managing the availability of services, controlling demand, optimizing capacity utilization, scheduling of operations and fixing problems. Guidance is provided on supporting operations through new models and architectures such as shared services, utility computing, web services and mobile commerce.

Service Operation delivers the service on an ongoing basis, overseeing the daily overall health of the service. This includes managing disruptions to service through rapid restoration of incidents, determining the root cause of problems and detecting trends associated with recurring issues, handling daily routine end user requests and managing service access.

CONTINUOUS SERVICE IMPROVEMENT:
Enveloping the Service Lifecycle is Continual Service Improvement (CSI). CSI offers a mechanism for IT to measure and improve the service levels, the technology and the efficiency and effectiveness or processes used in the overall management of services. CSI provides instrumental guidance in creating and maintaining value for customers through better design, introduction, and operation of services. It combines principles, practices, and methods from quality management, Change Management and capability improvement. Organizations learn to realize incremental and large-scale improvements in service quality, operational efficiency and business continuity. Guidance is provided for linking improvement efforts and outcomes with service strategy, design, and transition.

BENEFITS of ITIL
ITIL is a public framework that describes Best Practice in IT service management. It provides a framework for the governance of IT, the ‘service wrap’, and focuses on the continual measurement and improvement of the quality of IT service delivered, from both a business and a customer perspective. This focus is a major factor in ITIL’s worldwide success and has contributed to its prolific usage and to the key benefits obtained by those organizations deploying the techniques and processes throughout their organizations. Some of these benefits include:

- Alignment with business needs. ITIL becomes an asset to the business when IT can proactively recommend solutions as a response to one or more business needs. The IT Strategy Group recommended in Service Strategy and the implementation of Service
Portfolio Management gives IT the opportunity to understand the business’ current and future needs and develop service offerings that can address them.

- Negotiated achievable service levels. Business and IT become true partners when they can agree upon realistic service levels that deliver the necessary value at an acceptable cost.
- Predictable, consistent processes. Customer expectations can be set and are easier to meet with through the use of predictable processes that are consistently used. As well, good practice processes are foundational and can assist in laying the groundwork to meet regulatory compliance requirements.
- Efficiency in service delivery. Well-defined processes with clearly documented accountability for each activity as recommended through the use of a RACI matrix can significantly increase the efficiency of processes. In conjunction with the evaluation of efficiency metrics that indicate the time required to perform each activity, service delivery tasks can be optimized.
- Measurable, improvable services and processes. The adage that you can’t manage what you cannot measure rings true here. Consistent, repeatable processes can be measured and therefore can be better tuned for accurate delivery and overall effectiveness. For example, presume that a critical success factor for incident management is to reduce the time to restore service. When predictable, consistent processes are used key performance indicators such as Mean Time to Restore Service can be captured to determine whether this KPI is trending in a positive or negative direction so that the appropriate adjustments can be made. Additionally, under ITIL guidelines, services are designed to be measurable. With the proper metrics and monitoring in place, IT organizations can monitor SLAs and make improvements as necessary.
- A common Language – Terms are defined
- Increased user and customer satisfaction with IT services.
- Financial savings from reduced rework, lost time, improved resource management & usage.

REFERENCES:
1. www.apmgroupltd.com
2. http://www.itsmf.co.uk (itsmf – The IT service management forum) - An Introductory overview of ITIL v3